

Appendix E

Vernal Pool Data

Forms

CALAIS LNG
VERNAL POOL EVALUATION PLAN

Survey Methodology

1.0. Introduction

The goal of the vernal pool survey was to identify all vernal pools, as well as those defined as Significant (as defined by Chapter 335, Section 9 of the MEDEP regulations and modified by LD 1952, "An Act to Streamline the Administration of Significant Vernal Pool Habitat Protection") that may be impacted by construction of the proposed Terminal or Pipeline.

2.0. Proposed Vernal Pool Survey Methodology

Vernal Pool Assessment Study methods were developed pursuant to Chapter 335, Section 9 of the Maine Significant Wildlife Habitat Rules

Phases of the Vernal Pool Assessment Study are described below.

1. Reconnaissance

An initial site visit was conducted by VHB biologists during the week of April 14, 2008. The multiple purposes of the visit included locating the project area, identifying access points, observing amphibian chorusing and egg-laying, and performing general reconnaissance activities.

At the time of the initial visit, amphibian observations were challenging, due to a remaining two-foot snowpack. Consequently, a second reconnaissance visit was conducted during the week of April 28.

2. Identify an Optimal Survey Window

This year's severe winter weather appears to have moved the breeding season later than normal. This unusual weather also may be responsible for what was observed to be relatively low wood frog reproduction and relatively high spotted salamander reproduction. For this reason, the recommended survey window, as described in the regulations, required adjustment.

The final timeframe for the amphibian survey was between April 30 and May 30, 2008. To accommodate for the suspected later annual hatch, all sites visited prior to May 12 were surveyed a second time for additional salamander egg masses.

3. Conduct Wood Frog Survey

Approximately two weeks after the peak of wood frog chorusing, the survey was initiated. VHB biologists located potential vernal pools throughout the project area, including the Terminal Site, Mitigation Site, and Pipeline Corridor. Wood frog egg masses were counted and each pool was evaluated for the following criteria:

- Presence of fish and a permanent inlet or outlet. Pools with fish or either a permanent inlet or outlet were excluded as SVPs (Chapter 335, Section 9; LD 1952). Pools without fish or a

permanent inlet or outlet were considered to be candidate pools for SVP designation. Beaver impoundments were assumed to support fish.

- Number of wood frog egg masses. Pools with 40 or more egg masses constituted SVPs (Chapter 335, Section 9).
- Presence of fairly shrimp or rare, threatened, or endangered (RTE) species.

Pools surveyed following wood frog hatch were evaluated based on egg mass remains as well as wood frog tadpole densities in relation to pool size. Natural pools with common wood frog tadpoles and either ½ of the SVP criteria for salamander egg masses or estimated to be >100 square feet were considered for SVP status, natural pools had significance based on wood frog tadpole density if eggs had hatched out at the time of the visit.

On the Terminal Site, all 330 acres were surveyed for vernal pools. On the pipeline route, a 575 foot wide corridor was surveyed (250 feet on either side of the 75 foot construction corridor) where the pipeline passes through undisturbed land.

4. Conduct Salamander Survey

Following the completion of the Wood Frog Survey, all suspected vernal pools were revisited to observe salamander abundance and production. During this Salamander Survey, egg masses from spotted and blue-spotted salamanders were counted. If 20 or more spotted salamander egg masses or 10 or more blue-spotted salamander egg masses were observed, the pool was identified as a possible SVP and documented on the April 2008 SVP form. The presence of fairy shrimp within a pool and/or observed habitat use by RTE species also qualify pools of natural origin as SVPs.

5. Conduct Fairy Shrimp Survey

Pools were sampled for the presence of fairy shrimp during both the Wood Frog Survey and during the Salamander Survey. Sampling involved sweeping the water column with dip nets in sunny portions of the pool. No fairy shrimp were observed in any of the pools involved in this study.

6. Monitor for State-listed Rare, Threatened, or Endangered Species

Field biologists made observations during every visit to identified vernal pools in order to assess the presence of or potential use by state-listed RTE species. The wood turtle (*Clemmys insculpta*) was the only special status species found in the vicinity of the project area. In the state of Maine, the Department of Inland Fisheries and Wildlife lists the wood turtle as a “Species of Special Concern.” More detailed discussion of wood turtle distribution and habitat within the project area can be found in Resource Report **Section 3.4**.

7. 2009 Additional Field Work

In the spring of 2009 (i.e., April 28th to May 30th), VHB biologists surveyed additional areas where the proposed pipeline corridor route had been modified (by route variation and corridor widening) and to recheck several vernal pools identified in 2008. During the 2009 field work, VHB biologists identified two additional vernal pools along the pipeline. Also, the pipeline route was shifted in various locations to avoid impacts several vernal pools, some of which were identified as significant. **Table 2** highlights the pools that are no longer within 250' from the existing construction corridor, but have upland habitat (750' buffer) impacted by the project. Additionally, the status of a total of eight vernal pools identified in 2008 was modified based on new data/observations collected in 2009:

- Five (5) of the potential vernal pools identified in 2008 were upgraded to vernal pools in 2009 based on presence of vernal pool indicator species.
- Two (2) of the 2008 vernal pools revisited in 2009 were determined to not meet the criteria for a vernal pool due to their disturbed nature.
- One (1) of the 2008 vernal pools was down-graded to a non-vernal pool as a result of the 2009 field work.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-1, Terminal Site

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brustlin, Inc

Street: 6 Bedford Farms Drive

City: Bedford State: NH Zip: 03110

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: 20+ years of experience. NH Certified Wetland Scientist (#14), NH Certified Soil Scientist (#19), Maine Certified Soil Scientist (#271). Ph.D., M.S. Plant Ecology, University of New Hampshire (1996), B.S. Soil Science, University of New Hampshire

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C2 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.
 Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.
 GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)
 The center of the pool is approximately _____ m /ft in the compass direction of _____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

- Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No
- Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown
- Landowner's contact information (if known) Name: Map 21, Lot 8 & Map 22, Lot 7 Phone: _____
Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5/14/2008

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Man made

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: Man made in Stream

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Pool's estimated hydroperiod is permanent based on the size and depth of pool during observation. Pool also contains mineral soils.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 25 m ft Length: 51 m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow or restricted to deepest portion
 Organic matter (peat/muck/mud) deep and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns, lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern, interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies, water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5/14/2008

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)				Tadpoles/Larvae		
	#	Method of Verification*	Confidence Level**		Method of Verification*	Confidence Level**	
Wood Frog							
Spotted Salamander	29	S	3				
Blue-spotted Salamander							
Fairy Shrimp							

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Hanging culvert nearby. No passage possible from downstream

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5/14/2008

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-1 – Terminal Site



Photo 1: View of vernal pool cover with silt.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-2 Terminal Site

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)

Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

- Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

- Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C2 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 22, Lot 7 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-14-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)
 Unknown

Pool partially drained by ephemeral outlet. Shallow pool located in small depression. Periphery consists of woody
and herbaceous plants indicating a seasonal drop in water level.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 10 _____ m ft Length: 10 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)
 Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-14-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1 = <60%, 2 = 60-95%, 3 = >95%

**Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-12-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria

Representative Vernal Pool Photos, Calais, ME
VP-2 – Terminal Site



Photo 1: Vernal pool photo taken facing east.



Photo 2: View of vernal pool facing south, southeast.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-3 Terminal Site

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

- Professional Herpetologist and/or Ecologist Trained Citizen Scientist
 Professional Wetland Scientist Self-informed Naturalist
 Professional Biologist (concentration: _____) Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools:

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C2 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 21, Lot 8 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-14-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Significant quantity of woody (speckled alder) and herbaceous plants observed within and along the periphery indicating a seasonal absence of water. Pools substrate consists of organic matter.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 20 _____ m ft Length: 50 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-14-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered. P = Photographed. H = Handled. S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Part of a larger Alder Swamp System

OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-14-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIEW use only Reviewed by MDIEW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-3 – Terminal Site



Photo 1: Vernal Pool #3 viewed facing northwest.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-1 Mitigation Site _____

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)

Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord _____

Company: Vanasse Hangen Bruslin, Inc _____

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888 _____

Email: llord@vhb.com _____

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist

Trained Citizen Scientist

Professional Wetland Scientist

Self-informed Naturalist

Professional Biologist (concentration: _____)

Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C2 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 37, Lot 204 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-12-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent
(drying partially in all years and
completely in drought years) Ephemeral
(drying out during the growing
season in most years) Unknown

Submerged woody vegetation (shrubs) found along edge of pool. Edges likely dry out during the growing season,
with only the deepest portion (center) of the pool maintaining water.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 60 _____ m ft Length: 100 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-12-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*		Confidence Level**	
Wood Frog								
Spotted Salamander	20		S	3				
Blue-spotted Salamander								
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted: Wood Turtle
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Banded Tail Hawk (2), Classic High Quality Vernal Pool

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-12-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 Does not meet vernal pool definition criteria.



Representative Vernal Pool Photos, Calais, ME
VP-1 – Mitigation Site

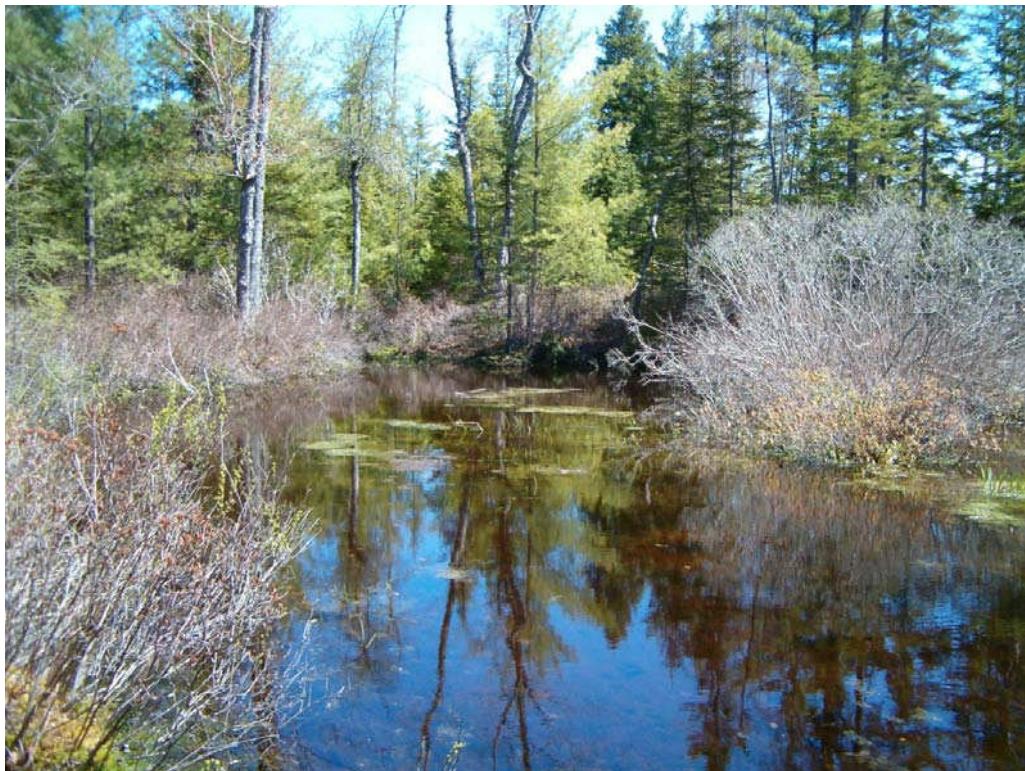


Photo 1: View of Vernal Pool facing NW



Photo 2: Visible Spotted Salamander egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-2 Mitigation Site

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C2 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 37, Lot 204 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-12-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)
 Unknown

Pool partially drained by ephemeral outlet. Peripheral vegetation consist of woody and herbaceous plants
indicating a seasonal drop in water level.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 100 _____ m ft Length: 100 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)
 Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet
or outlet Other or Unknown (explain):
Ephemeral outlet to the north



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-12-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Deep Pool

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-12-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDI/EW use only Reviewed by MDI/EW Date: Initials:

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

**Representative Vernal Pool Photos, Calais, ME
VP-2 - Mitigation Site**



Photo 1: View of vernal pool facing northeast.



Photo 2: View of vernal pool facing north.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-3 Mitigation Site _____

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord _____

Company: Vanasse Hangen Brusltin, Inc _____

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888 _____

Email: llord@vhb.com _____

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

- Professional Herpetologist and/or Ecologist Trained Citizen Scientist
 Professional Wetland Scientist Self-informed Naturalist
 Professional Biologist (concentration: _____) Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C2 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 33, Lot 203 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-15-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Old Skidder Scrape

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Shallow pool in old skidder scrape within a generally flat landscape. Run-off is dispersed over a large area rather than directly to pool.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 15 _____ m ft Length: 100 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-15-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)				Tadpoles/Larvae	
	#	Method of Verification*	Confidence Level**		Method of Verification*	Confidence Level**
Wood Frog	6	S	3			
Spotted Salamander	62	S	3			
Blue-spotted Salamander						
Fairy Shrimp						

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Old skidder scrape

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-15-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDI/EW use only Reviewed by MDI/EW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR
 does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

**Representative Vernal Pool Photos, Calais, ME
VP-3 – Mitigation Site**



Photo 1: View of vernal pool which has formed in a naturalized skidder scrape.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-4

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

- Professional Herpetologist and/or Ecologist Trained Citizen Scientist
 Professional Wetland Scientist Self-informed Naturalist
 Professional Biologist (concentration: _____) Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C2 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 33, Lot 202 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-21-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Naturalized. Very old skidder scrape

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Shallow pool in old skidder scrape within a generally flat landscape. Run-off is dispersed over a large area rather than directly to pool.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 15 _____ m ft Length: 30 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-21-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date)

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered. P = Photographed. H = Handled. S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Naturalized skidder scrape. Wood frogs recently hatched

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-21-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDI/EW use only Reviewed by MDI/EW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-4



Photo 1: View of vernal pool facing east.



Photo 2: View of vernal pool facing west.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-5

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 33, Lot 115 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-20-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Pit & mound Balsam Forest Wetland

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: Very slow flow. Meandering

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Shallow pool located in relatively flat area of forest. Water is dispersed over larger surrounding wetland.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 50 _____ m ft Length: 50 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
 and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-20-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)						Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*		Confidence Level**		
Wood Frog	1		S	3					
Spotted Salamander	7		S	3					
Blue-spotted Salamander									
Fairy Shrimp									

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted: Wood Turtle
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Pit and mound topography

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-20-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-5



Photo 1: View of vernal pool facing north.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-6

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

- Professional Herpetologist and/or Ecologist Trained Citizen Scientist
 Professional Wetland Scientist Self-informed Naturalist
 Professional Biologist (concentration: _____) Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 33, Lot 117-1 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-29-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Unpaved access road

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent (drying partially in all years and completely in drought years) Ephemeral (drying out during the growing season in most years) Unknown

Woody and herbaceous plants located along periphery of pool indicating a seasonal drop in water level. Pool predominate substrate consists of mineral soil.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 25 _____ m ft Length: 34 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow or restricted to deepest portion
 Organic matter (peat/muck/mud) deep and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns, lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern, interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies, water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-29-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date)

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered. P = Photographed. H = Handled. S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Adjacent to existing unpaved roadway.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-29-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDI/EW use only Reviewed by MDI/EW Date: Initials:

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR
 does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-6



Photo 1: View of vernal pool facing south.



Photo 2: View of egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-7

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

- Professional Herpetologist and/or Ecologist Trained Citizen Scientist
 Professional Wetland Scientist Self-informed Naturalist
 Professional Biologist (concentration: _____) Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 33, Lot 117 &116 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-29-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Unpaved access road

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent (drying partially in all years and completely in drought years) Ephemeral (drying out during the growing season in most years) Unknown

Dense woody and herbaceous vegetation located within and along periphery of pool indicating seasonal drop in water level.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 130 _____ m ft Length: 275 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow or restricted to deepest portion
 Organic matter (peat/muck/mud) deep and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns, lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern, interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies, water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-29-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Located along existing unpaved roadway. Road maybe causing elevated inundation.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-29-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDI/EW use only Reviewed by MDI/EW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-7



Photo 1: View of vernal pool facing northwest.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-8

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 33, Lot 117 Phone: _____

Street Address: Carson Road City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-15-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Naturalized skidder rut.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent
(drying partially in all years and
completely in drought years) Ephemeral
(drying out during the growing
season in most years) Unknown

Small shallow pool located in old skidder rut.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 10 _____ m ft Length: 16 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-15-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*	Confidence Level**		
Wood Frog	1		S	2				
Spotted Salamander	1		S H P	3				
Blue-spotted Salamander								
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted: Wood Turtle
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

mosquitoes, water spiders, caddis flies. Forested Wetland/forested upland/old logging road. Surrounding habitat includes unmanaged upland forested and forested wetland

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-15-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-8



Photo I: View of shallow pool facing northeast.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-9

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 33, Lot 119 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-29-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Blasted rock crevice

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Blasted Rock Crevice

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Shallow pool located in small blasted rock crevice. Staining on rocks indicating rising and falling water levels.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 6 _____ m ft Length: 12 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-29-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)				Tadpoles/Larvae	
	#	Method of Verification*	Confidence Level**		Method of Verification*	Confidence Level**
Wood Frog						
Spotted Salamander	3	S	3			
Blue-spotted Salamander						
Fairy Shrimp						

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-29-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria

Representative Vernal Pool Photos, Calais, ME
VP-9



Photo 1: View of vernal pool within blasted rock crevice.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-10

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Bruslin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

- Professional Herpetologist and/or Ecologist Trained Citizen Scientist
 Professional Wetland Scientist Self-informed Naturalist
 Professional Biologist (concentration: _____) Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 33, Lot 121 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-15-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: Man made pool

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Historic rock quarry pool - blasted

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Pool relatively large and deep located in blasted rock quarry depression. Pool primarily shaded. Pool located in low-lying area within surrounding landscape with steep rock and vegetated banks.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 5 _____ m ft Length: 20 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-15-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*	Confidence Level**		
Wood Frog								
Spotted Salamander	17	S	H	P	3			
Blue-spotted Salamander								
Fairy Shrimp							Tadpoles/Larvae	

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted: Wood Turtle
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Few wood frog tadpoles. Blasted out; located near road. Shaded area and unlikely to dry up

Mosquito larvae

Surrounding habitat has recently been harvested, with areas of unmanaged upland forest

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-15-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-10



Photo 1: View of quarry pool.



Photo 2: View of Spotted Salamander egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-11

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)

Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

- Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

- Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 33, Lot 121 and Map 33, Lot 120 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-15-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: Man made rock basin

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:
man made - blasted from rock

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Large deep pool located in man-made blasted rock depression. Pool's predominate substrate consists of mineral soil. Pool contains steep vegetated banks. Pool located in low lying area within the surrounding landscape.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 15 _____ m ft Length: 30 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-15-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Wood Frog Tadpoles common in pool. No nonwoody vegetation indicators in pool

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-15-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDI/EW use only Reviewed by MDI/EW Date: Initials:

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

**Representative Vernal Pool Photos, Calais, ME
VP-11**



Photo 1: View of Vernal Pool facing west.



Photo 2: View of Blue Spotted Salamander eggs.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-12

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 33, Lot 120 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-15-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Peripheral vegetation consist of woody and herbaceous plants indicating a seasonal drop in water level. Large mounds of grass and sedges located within portions of pool.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 50 _____ m ft Length: 70 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow or restricted to deepest portion
 Organic matter (peat/muck/mud) deep and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns, lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern, interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies, water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-15-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date)

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered. P = Photographed. H = Handled. S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

2 adult green frogs in pond. Diving beetles, mosquito larvae

Adjacent to recent logging activity

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-15-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria

Representative Vernal Pool Photos, Calais, ME
VP-12



Photo 1: View of vernal pool facing southeast.



Photo 2: View of Spotted Salamander egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-13

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 33, Lot 121 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-15-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:
Blasted rock pond in woods.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent (drying partially in all years and completely in drought years) Ephemeral (drying out during the growing season in most years) Unknown

Pool located in man-made blasted rock depression with mineral soil substrate. Water collects within this low lying area. Pool consists of relatively steep rock banks. No outlet found.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 10 _____ m ft Length: 20 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow or restricted to deepest portion
 Organic matter (peat/muck/mud) deep and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns, lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern, interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies, water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-15-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

1 adult green frog in pool. Few wood frog tadpoles. No vegetation just algae.

Naturalized rock quarry

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-15-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDI/EW use only Reviewed by MDI/EW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR
 does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-13



Photo 1: View of vernal pool, with blasted rock.



Photo 2: View of vernal pool facing northeast.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-14

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 32, Lot 135 & Map 33, Lot 120 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-15-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)
 Unknown

Peripheral vegetation consist of dense woody and herbaceous plants indicating a seasonal drop in water level.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 50 _____ m ft Length: 120 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)
 Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-15-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)						Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*		Confidence Level**		
Wood Frog	3		S	2					
Spotted Salamander	29		S H	3					
Blue-spotted Salamander									
Fairy Shrimp									

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted: Wood Turtle
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Many wood frog tadpoles found clustered in logged/disturbed area.

1 adult green frog found

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-15-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-14



Photo 1: View of vernal pool area, previously disturbed by logging.



Photo 2: View Spotted Salamander eggs.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-15

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

- Professional Herpetologist and/or Ecologist Trained Citizen Scientist
 Professional Wetland Scientist Self-informed Naturalist
 Professional Biologist (concentration: _____) Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 32, Lot 144 & Map 33, Lot 120 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-14-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Logging road through edge of pool/wetland; upland area has been logged.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Pool located within larger wetland complex consisting of dense woody and herbaceous vegetation. Pool is made up of pockets of shallow water dispersed through large flat wetland.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 30 _____ m ft Length: 50 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-14-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*	Confidence Level**		
Wood Frog								
Spotted Salamander	14	S	H	P	3			
Blue-spotted Salamander								
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted: Wood Turtle
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

mosquito larvae, caddis flies observed

1 young green frog found

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-15-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or Does not meet vernal pool definition criteria.



Representative Vernal Pool Photos, Calais, ME
VP-15



Photo 1: View of vernal pool facing north.



Photo 2: View of Spotted Salamander egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-16

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

- Professional Herpetologist and/or Ecologist Trained Citizen Scientist
 Professional Wetland Scientist Self-informed Naturalist
 Professional Biologist (concentration: _____) Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 32, Lot 135 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-28-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Shallow pool located in relatively flat area. Run-off is dispersed over a large area rather directly to pool. Dense woody and herbaceous vegetation found within pool indicating significant seasonal drop in water level.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 35 _____ m ft Length: 40 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) or restricted to deepest portion
_____ Organic matter (peat/muck/mud) deep
_____ and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
_____ Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-28-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*	Confidence Level**		
Wood Frog	22		S	3				
Spotted Salamander	20		S	3				
Blue-spotted Salamander								
Fairy Shrimp							Tadpoles/Larvae	

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted: Wood Turtle
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Vernal pool located just outside pipeline corridor.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-28-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-16



Photo 1: View of vernal pool. This pool is outside of the corridor.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-17

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 32, Lot 135 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-27-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Large relatively shallow pool containing woody vegetation indicating drop in seasonal water levels.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 50 _____ m ft Length: 45 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-27-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Speckled alder vegetation.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-27-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDI/EW use only Reviewed by MDI/EW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR
 does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-18

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 32, Lot 135 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-27-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Relatively large shallow pool located in relatively flat area. Run-off is dispersed over a large area rather directly to pool. Dense vegetation found within pool indicating significant seasonal drop in water level.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 10 _____ m ft Length: 50 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-27-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered. P = Photographed. H = Handled. S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Wood Frog tadpoles common within pool. Relatively large pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-27-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIEW use only Reviewed by MDIEW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria

Representative Vernal Pool Photos, Calais, ME
VP-18



Photo 1: View of vernal pool.



Photo 2: View of egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-19

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 32, Lot 143 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-28-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Old Quarry

- Check all wetland types that best apply to this pool:

<input type="checkbox"/> Forested swamp	<input type="checkbox"/> Wet meadow	<input type="checkbox"/> Slow stream
<input type="checkbox"/> Shrub swamp	<input checked="" type="checkbox"/> Shallow pond	<input type="checkbox"/> Floodplain overflow
<input type="checkbox"/> Peatland (fen or bog)	<input type="checkbox"/> Abandoned beaver flowage	<input type="checkbox"/> Headwater seepage
<input type="checkbox"/> Emergent marsh	<input type="checkbox"/> Active beaver flowage	<input checked="" type="checkbox"/> Other: Old Quarry

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:
Old Rock Quarry.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent (drying partially in all years and completely in drought years) Ephemeral (drying out during the growing season in most years) Unknown

Pool deep in center, but not very large overall. Pool substrate consists of mineral soil. Woody and herbaceous vegetation located along periphery indicating seasonal drop in water levels.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 5 _____ m ft Length: 6 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow or restricted to deepest portion
 Organic matter (peat/muck/mud) deep and widespread

- Nonwoody pool vegetation indicators (check all that apply):

<input type="checkbox"/> Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	<input type="checkbox"/> Sphagnum moss (anchored or suspended)
<input type="checkbox"/> Dry site ferns (e.g. spinulose wood ferns, lady fern, polypody fern)	<input type="checkbox"/> Wet site ferns (e.g. royal fern, cinnamon fern, interrupted fern)
<input type="checkbox"/> Moist site ferns (e.g. sensitive fern, marsh fern, New York fern)	<input type="checkbox"/> Wet site graminoids (e.g. grasses, sedges, cattails)
<input type="checkbox"/> Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)	<input type="checkbox"/> Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
	<input type="checkbox"/> Floating or submerged aquatics (e.g. water lilies, water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-28-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Surrounding habitat primarily unmanaged upland forest. Old Quarry Site.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-28-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Representative Vernal Pool Photos, Calais, ME
VP-19



Photo 1: View of vernal pool within old rock quarry.



Photo 2: View of egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-20

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 32, Lot 135 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-27-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Small Quarry

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: Quarry-excavated man-made

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Pool located in depressional area of old rock quarry. Pool lies in low-lying area capturing draining from the surrounding landscape. No outlet present.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 10 _____ m ft Length: 11 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-27-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)				Tadpoles/Larvae	
	#	Method of Verification*	Confidence Level**		Method of Verification*	Confidence Level**
Wood Frog						
Spotted Salamander	22	S	3			
Blue-spotted Salamander						
Fairy Shrimp						

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Wood frog tadpoles common within pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-27-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-20



Photo 1: View of vernal pool facing north within naturalized quarry.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-21

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: _____ Phone: _____

Street Address: _____ City: Calais State: ME Zip: _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-27-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Relatively small shallow pool with no inlet or outlet. Evidence of pool drying out observed while in the field.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 20 _____ m ft Length: 20 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-27-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*	Confidence Level**		
Wood Frog						Many		
Spotted Salamander	2		S					
Blue-spotted Salamander								
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted: Wood Turtle
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-27-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-21



Photo I: View of shallow, isolated vernal pool.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-22

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 32, Lot 135 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-27-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Quarry

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: Quarry

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Old Quarry

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Large deep pool located within blasted rock quarry depression. Established steep rock/vegetated banks. Pool located in low-lying area and captures drainage from surrounding landscape. No outlet present.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 30 m ft Length: 10 m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet
 Ephemeral inlet
or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-27-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)				Tadpoles/Larvae	
	#	Method of Verification*	Confidence Level**		Method of Verification*	Confidence Level**
Wood Frog						
Spotted Salamander	20	S	3			
Blue-spotted Salamander						
Fairy Shrimp						

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Wood Frog Tadpoles common within pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-27-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Representative Vernal Pool Photos, Calais, ME
VP-22



Photo 1: View of vernal pool within old rock quarry.



Photo 2: View of egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-23

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 32, Lot 143 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-27-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Unmanaged upland forest

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Shallow pool within a generally flat landscape. Run-off dispersed over a large area rather than directly to pool.

Dense woody and herbaceous vegetation located within pool indicating seasonal drop/absence of water.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 30 _____ m ft Length: 35 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-27-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)				Tadpoles/Larvae			
	#	Method of Verification*	Confidence Level**	Method of Verification*	Confidence Level**			
Wood Frog								
Spotted Salamander	6	S	3					
Blue-spotted Salamander								
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted:
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Few wood frog tadpoles observed within pool. Surrounding habitat consists of upland unmanaged forest.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-27-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-23



Photo I: View of vernal pool facing west.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-24

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 32, Lot 143 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-28-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Unmanaged upland forest/forested wetland

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Shallow pool made up of pockets dispersed over larger wetland system. Dense woody and herbaceous vegetation observed along the periphery of the pool indicating a seasonal drop in water levels.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 30 _____ m ft Length: 35 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland mosses present)
 Mineral soil (sphagnum moss present)
 Organic matter (peat/muck/mud) shallow or restricted to deepest portion
 Organic matter (peat/muck/mud) deep and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns, lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern, interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies, water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-27-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

6 recently hatched and 2 unhatched Spotted Salamander Egg masses observed within pool. Surrounding habitat comprised of upland and wetland forest.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-28-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Representative Vernal Pool Photos, Calais, ME
VP-24



Photo 1: View of vernal pool pocket within larger wetland system.



Photo 2: View of vernal pool pocket.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-25

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 32, Lot 143 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-28-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Historic Quarry

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: Quarry

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Naturalized rock quarry

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Large pool located in a relatively deep man-made rock quarry depression. Established steep rock/vegetated banks.
No outlet present.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 20 _____ m ft Length: 20 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-27-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*	Confidence Level**		
Wood Frog								
Spotted Salamander	46	S	P	3				
Blue-spotted Salamander	2	S	H	3				
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted:
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Historic Rock Quarry- Naturalized high value pool. Surrounding habitat consists of unmanaged upland forest.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-27-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or Does not meet vernal pool definition criteria.



Representative Vernal Pool Photos, Calais, ME
VP-25



Photo 1: View of vernal pool within old quarry.



Photo 2: View of egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-26

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 32, Lot 143 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-27-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Small shallow pool with dense woody vegetation within and surrounding it. Likely dries out during the growing season.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 9 _____ m ft Length: 10 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-27-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered. P = Photographed. H = Handled. S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Small natural ephemeral pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-27-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIEW use only Reviewed by MDIEW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-26



Photo 1: View of vernal pool facing west.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-27

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 29, Lot 147 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-21-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Small shallow pool with woody and herbaceous vegetation growing within and along its periphery.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 6 _____ m ft Length: 8 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-21-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*	Confidence Level**		
Wood Frog								
Spotted Salamander	2	S		3				
Blue-spotted Salamander								
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted:
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Shallow pool, likely dry by July. Some algae observed within pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-21-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-27



Photo I: View of vernal pool facing east.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-28

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 37C1 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 29, Lot 161 & 161-1 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-22-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Large shallow pool dispersed throughout a generally flat landscape. Very dense woody and herbaceous vegetation growing within pool indicating seasonal drop/absence of water.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-22-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1 = <60%, 2 = 60-95%, 3 = >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(confidence level (CL) for each species observation. Observations must Form (available from MDIFW) and photographs (labeled with observer)

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Hatched wood frog egg casing also seen.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-22-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-28



Photo 1: View of vernal pool facing north.



Photo 2: View of vernal pool facing northeast.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-29

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C5 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 29, Lot 171 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-13-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: PSS1B wetland

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Shallow broad pool dispersed through relatively flat landscape. Dense woody and herbaceous vegetation growing within pool and along the periphery indicating seasonal drop/absence of water.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 17 _____ m ft Length: 37 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-13-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)						Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**		Method of Verification*	Confidence Level**		
Wood Frog	**100	S	H	3					
Spotted Salamander	160+	S	H	P	3				
Blue-spotted Salamander		S	H	P					
Fairy Shrimp									

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted:
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Classic VP- water level based on exposed moss, and water stained leaves. Appears to have dried up quickly, some Spotted Salamander egg masses >3' from pool edge and out of water completely. **Greater than 100 wood frog tadpoles observed. Surrounding habitat consists of unmanaged upland forest, recently harvested forest, and wetland.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-13-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or Does not meet vernal pool definition criteria.

Representative Vernal Pool Photos, Calais, ME
VP-29



Photo 1: View of shallow, isolated vernal pool.



Photo 2: View of spotted salamander eggs out of water.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-30

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C5 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 26, Lot 16 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-13-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Very small and shallow pool (5-6" deep). Likely will dry up due to lack of cover.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 2 _____ m ft Length: 6 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-13-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

**Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No

■ If yes above, indicate which species were targeted:

- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered. P = Photographed. H = Handled. S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Surrounding habitat consists of upland unmanaged forest.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-13-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-30



Photo 1: View of small isolated pool with Spotted Salamander egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-31

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C5 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 26, Lot 16 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-12-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Pool within shrubby peat/sphagnum wetland- pools likely ephemeral based on shallowness, 6" max.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-13-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Cryptic Pool. Surrounding habitat consists of unmanaged upland forest, recently harvested forest and bog wetland.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Whereby certify that the
Signature Leonard Lord

Date 5-12-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIEW use only Reviewed by MDIEW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Representative Vernal Pool Photos, Calais, ME
VP-31



Photo 1: View of vernal pool facing northwest.



Photo 2: View of Spotted Salamander egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-32

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C5 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 26, Lot 16 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-12-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Very shallow pool (6" depth). Lots of herbaceous and woody vegetation. Pool likely recedes and sphagnum stays wet.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 20 _____ m ft Length: 40 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-12-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No

■ If yes above, indicate which species were targeted:

- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Few wood frog tadpoles observed within pool. Mosquito larvae present, woodcock drumming near by. Surrounding habitat consists of unmanaged upland forest, recently harvested forest, and bog wetland.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-12-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria

Representative Vernal Pool Photos, Calais, ME
VP-32



Photo 1: View of vernal pool facing south.



Photo 2: View of Spotted Salamander egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-33

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C5 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 26, Lot 16 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-12-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Modified by logging ruts, logging activity.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

VP comprised over many shallow pockets dispersed throughout larger wetland area.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 50 _____ m ft Length: 55 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-12-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(confidence level (CL) for each species observation. Observations must Form (available from MDIFW) and photographs (labeled with observer n

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

**Common wood frog tadpoles observed within pool. Woodcock drumming heard near by, deer scat observed.

Surrounding habitat consists of recently harvested forest and scrub-shrub wetland.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-12-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria

Representative Vernal Pool Photos, Calais, ME
VP-33



Photo 1: View of small vernal pool modified by past logging activity.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-34

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C5 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 26, Lot 16 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-12-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Modified by recent logging activity.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Shallow pool associated with larger wetland. Dense woody vegetation observed within and surrounding pool indicating drop/absence in water level.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 30 _____ m ft Length: 15 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-12-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Surrounding habitat consists of recently harvested forest and scrub-shrub wetland.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-12-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDI/EW use only Reviewed by MDI/EW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria

Representative Vernal Pool Photos, Calais, ME
VP-34



Photo 1: View of vernal pool facing southeast.

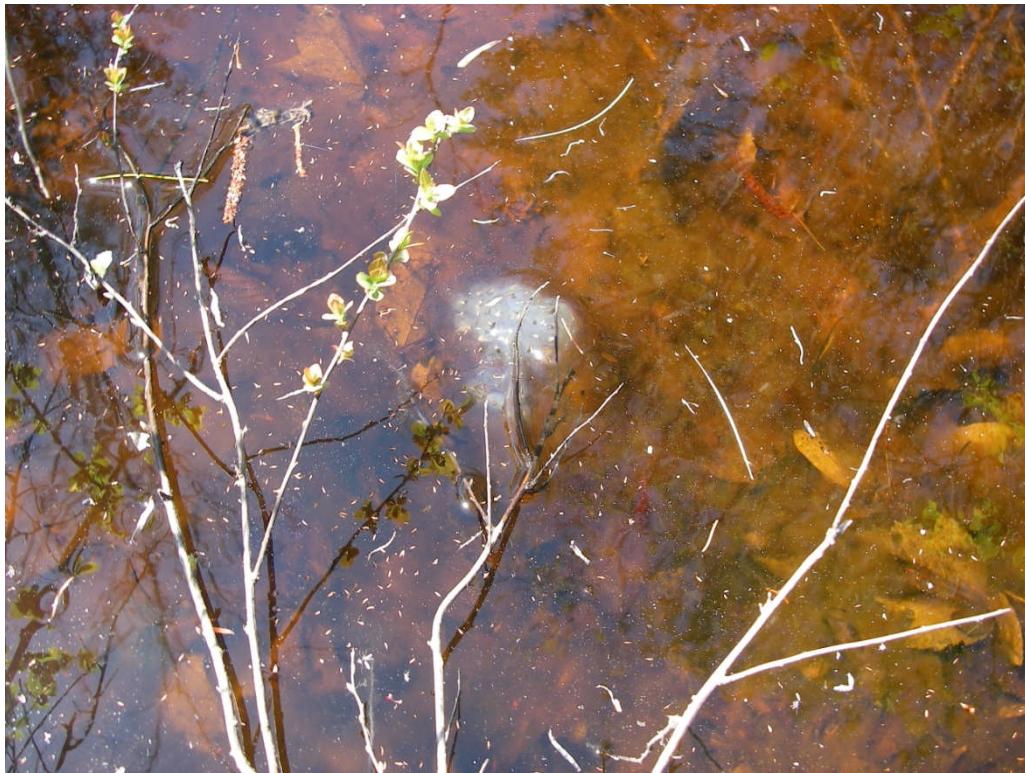


Photo 2: View of Spotted Salamander egg mass.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-35

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C5 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 26, Lot 16 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-12-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: may not meet all 3 wetland criteria

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Some ruts from logging equipment, location suggests it was natural prior to logging activity.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Shallow pool dispersed throughout generally flat landscape. Trees and other woody vegetation growing within pool indicating seasonal absence of water.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 25 _____ m ft Length: 100 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-12-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(confidence level (CL) for each species observation. Observations must Form (available from MDIFW) and photographs (labeled with observer n

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Deer scat near by. Mosquito larvae, mayfly larvae throughout. Surrounding habitat consists of recently harvested forest.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-12-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDI/EW use only Reviewed by MDI/EW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-35



Photo 1: View of shallow, isolated, ephemeral vernal pool.

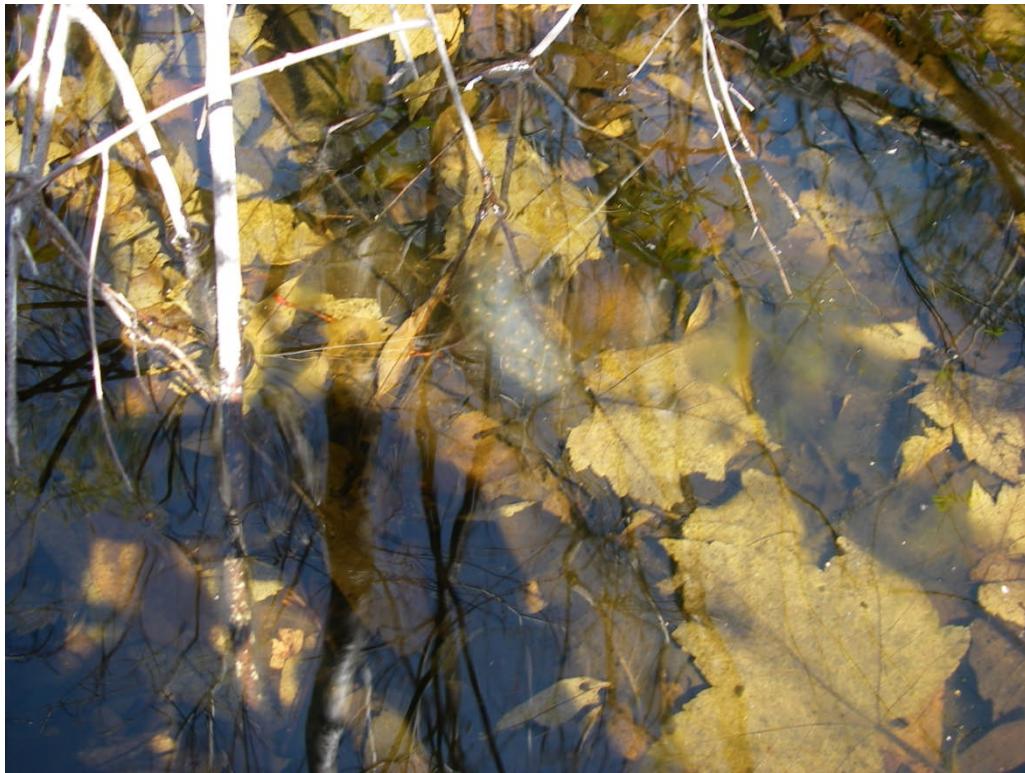


Photo 2: View of Spotted Salamander egg mass.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-36

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C5 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 26, Lot 16 Phone: _____

Street Address: _____ City: Calais State: ME Zip: 04619



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-12-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: Small, non-wetland

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Very small round shallow pool located in round rock crevice, likely dries out during the growing season.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 6 _____ m ft Length: 6 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-12-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)						Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*		Confidence Level**		
Wood Frog	3		S	P	3		**S		3
Spotted Salamander	2		S	P	3				
Blue-spotted Salamander									
Fairy Shrimp									

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted:
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

**Wood frog tadpoles common within pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-12-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-36



Photo 1: View of small vernal pool.



Photo 2: View of wood frog eggs recently hatched.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-38

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

- Professional Herpetologist and/or Ecologist Trained Citizen Scientist
 Professional Wetland Scientist Self-informed Naturalist
 Professional Biologist (concentration: _____) Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C5 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 2, Lot 15 Phone: _____

Street Address: _____ City: Baring State: ME Zip: 04649



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 7-25-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)
 Unknown

Pool located within depressional area. Good ability to retain water (mineral soil). Woody vegetation along the periphery indicating seasonal drop in water level.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)
 Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 7-25-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*	Confidence Level**		
Wood Frog						**S	3	
Spotted Salamander	**C	S		3				
Blue-spotted Salamander								
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted:
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

**Spotted Salamander Egg masses common within pool. Wood Frog tadpoles observed as well.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord _____ Date 7-25-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

**Representative Vernal Pool Photos, Calais, ME
VP-38**



Photo 1: View of vernal pool facing northeast.



Photo 2: View of vernal pool facing north.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-40

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 01, Lot 3 Phone: _____

Street Address: _____ City: Baring State: ME Zip: 04649



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-28-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Past logging activity likely within the vicinity of the pool.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent (drying partially in all years and completely in drought years) Ephemeral (drying out during the growing season in most years) Unknown

Woody and herbaceous vegetation growing along periphery of pool indicating seasonal drop in water level.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland mosses present) Organic matter (peat/muck/mud) shallow or restricted to deepest portion
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) deep and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns, lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern, interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies, water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-28-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

**Few wood frog tadpoles observed within pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-28-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIW use only Reviewed by MDIW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-40



Photo I: View of vernal pool facing south.

Representative Vernal Pool Photos, Calais, ME
VP-40



Photo 2: View of wood frog egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-41

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 06, Lot 1 Phone: _____

Street Address: _____ City: Baring State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-9-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:
Located adjacent to powerline corridor.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Flat landscape and rather shallow pool.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 10 _____ m ft Length: 10 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-9-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)				Tadpoles/Larvae			
	#	Method of Verification*	Confidence Level**	Method of Verification*	Confidence Level**			
Wood Frog						**S		3
Spotted Salamander								
Blue-spotted Salamander								
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted:
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

**Recently hatched wood frog egg masses and wood frog tadpoles observed within pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-9-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

**Representative Vernal Pool Photos, Calais, ME
VP-41**



Photo 1: Small vernal pool at edge of powerline corridor.



Photo 2: View of a wood frog found within pool.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-42

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 12, Lot 24 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-29-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Rather flat landscape, dryer mineral soils at edge with sensitive fern nearing the edge of water.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): adjacent to stream channel.



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-28-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)				Tadpoles/Larvae	
	#	Method of Verification*	Confidence Level**		Method of Verification*	Confidence Level**
Wood Frog	3	S	3			
Spotted Salamander						
Blue-spotted Salamander						
Fairy Shrimp						

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1 = <60%, 2 = 60-95%, 3 = >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(confidence level (CL) for each species observation. Observations must Form (available from MDIFW) and photographs (labeled with observer

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Pool adjacent to stream channel.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-28-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIEW use only Reviewed by MDIEW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR
 does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-42



Photo I: View of vernal pool facing west.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-43

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 12, Lot 24 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-29-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)
 Unknown

Deep pockets with woody vegetation at periphery and grasses, sphagnum nearing the center.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)
 Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-28-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

**Hatched wood frog egg masses and few wood frog tadpoles observed within pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-29-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIEW use only Reviewed by MDIEW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Representative Vernal Pool Photos, Calais, ME
VP-43



Photo 1: View of the vernal pool facing north.



Photo 2: View of the pool facing northeast.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-44

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 11, lot 64 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-28-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Previous logging activity.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Naturalized skidder scrape with woody periphery and herbaceous at edges.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-28-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(confidence level (CL) for each species observation. Observations must Form (available from MDIFW) and photographs (labeled with observer

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered. P = Photographed. H = Handled. S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Naturalized skidder crossing.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-28-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-44



Photo 1: View of isolated vernal pool within naturalized skidder scrape.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-45

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 11, Lot 63 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-28-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent
(drying partially in all years and
completely in drought years) Ephemeral
(drying out during the growing
season in most years) Unknown

Shallow pool, located in rather flat landscape.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 8 _____ m ft Length: 20 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-28-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(confidence level (CL) for each species observation. Observations must Form (available from MDIFW) and photographs (labeled with observer n

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered. P = Photographed. H = Handled. S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

A leopard frog was also spotted at this location.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-28-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDI/EW use only Reviewed by MDI/EW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR
 does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-45



Photo I: View of isolated, pocket vernal pool.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-46

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 11, Lot 63 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-28-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)
 Unknown

Periphery of pool is mix woody vegetation. Rock cervices creating deep pockets.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 8 _____ m ft Length: 20 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)
 Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-28-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(confidence level (CL) for each species observation. Observations must Form (available from MDIFW) and photographs (labeled with observer n

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

15' diameter swale within rock.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-28-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDI/EW use only Reviewed by MDI/EW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-46



Photo I: View of isolated vernal pool.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-47

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Bruslin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 11, Lot 63 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-29-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:
Naturalized skidder scrape.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent
(drying partially in all years and
completely in drought years) Ephemeral
(drying out during the growing
season in most years) Unknown

Flat, shallow pool, periphery is mostly herbaceous.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-29-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)				Tadpoles/Larvae	
	#	Method of Verification*	Confidence Level**		Method of Verification*	Confidence Level**
Wood Frog						
Spotted Salamander	3	S				
Blue-spotted Salamander						
Fairy Shrimp						

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Naturalized skidder rut.

Page 5-29-08

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria

Representative Vernal Pool Photos, Calais, ME
VP-47



Photo I: View of vernal pool.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-48

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 11, Lot 62 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-29-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Naturalized pool

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Created from previous logging activity.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent (drying partially in all years and completely in drought years) Ephemeral (drying out during the growing season in most years) Unknown

Woody and herbaceous vegetation along the periphery of pool.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland mosses present) Organic matter (peat/muck/mud) shallow or restricted to deepest portion
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) deep and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns, lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern, interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies, water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-29-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*	Confidence Level**		
Wood Frog						**S	3	
Spotted Salamander	5		S					
Blue-spotted Salamander								
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted:
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Wood frog tadpoles common within pool. Leopard frog seen as well.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-29-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

**Representative Vernal Pool Photos, Calais, ME
VP-48**



Photo 1: View of vernal pool, isolated pocket.



Photo 2: View of a Leopard frog.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-49

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 11, Lot 53 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-28-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: Naturalized Skidder scrape.

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:
Naturalized shallow excavation.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent
(drying partially in all years and
completely in drought years) Ephemeral
(drying out during the growing
season in most years) Unknown

Flat landscape, shallow excavation.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 10 _____ m ft Length: 15 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-28-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*	Confidence Level**		
Wood Frog						**S	3	
Spotted Salamander	>40	S		3				
Blue-spotted Salamander								
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted:
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

**Few wood frog tadpoles observed within pool. Forested wetland located adjacent to pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-28-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 Does not meet vernal pool definition criteria.



Representative Vernal Pool Photos, Calais, ME
VP-49



Photo 1: View of shallow, naturalized vernal pool.



Photo 2: View of vernal pool facing northeast.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-50

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 11, Lot 32 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-30-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Unpaved access road

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Pool located in area which has been modified by existing dirt drive and culvert.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent (drying partially in all years and completely in drought years) Ephemeral (drying out during the growing season in most years) Unknown

Man-made- ponded along dirt drive due to elevated culvert.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow or restricted to deepest portion
 Organic matter (peat/muck/mud) deep and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns, lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern, interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies, water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-30-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae				
	#	Method of Verification*		Confidence Level**	Method of Verification*		Confidence Level**			
Wood Frog									*Few	S
Spotted Salamander	>20		S							
Blue-spotted Salamander										
Fairy Shrimp										

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted:
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

*Few wood frog tadpoles observed within pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-30-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-50



Photo I: View of vernal pool.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-51

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 11, Lot 29 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-29-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:
Naturalized skidder scrape.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Woody and Herbaceous vegetation along the periphery of the pool, very shallow and rather flat landscape.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-29-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-29-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Representative Vernal Pool Photos, Calais, ME
VP-51



Photo 1: View of vernal pool.



Photo 2: View of egg masses. Both wood frog and spotted salamander masses observed.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-52

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 11, Lot 29 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-28-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Naturalized skidder scrape.

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Previous logging activity. Old skidder scrape.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Flat landscape, shallow pool with grasses and sedges at the periphery of the pool.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-28-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)			Tadpoles/Larvae		
	#	Method of Verification*	Confidence Level**	Method of Verification*	Confidence Level**	
Wood Frog				**S		3
Spotted Salamander	3	S				
Blue-spotted Salamander						
Fairy Shrimp						

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(confidence level (CL) for each species observation. Observations must Form (available from MDIFW) and photographs (labeled with observer

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Naturalized skidder scrape.

**Wood frog tadpoles common within pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-28-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

**Representative Vernal Pool Photos, Calais, ME
VP-52**



Photo 1: View of vernal pool.



Photo 2: Pool located in naturalized skidder scrape.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-53

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Bruslin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36B3 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 4, Lot 19 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-28-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Shallow pool, some woody vegetation along periphery of the pool.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 10 _____ m ft Length: 9 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
 Mineral soil (sphagnum moss present) or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-28-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1 = <60%, 2 = 60-95%, 3 = >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(confidence level (CL) for each species observation. Observations must Form (available from MDIFW) and photographs (labeled with observer

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-28-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-53



Photo 1: View of shallow vernal pool, facing west.



Photo 2: Visible wood frog egg masses.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-54

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Bruslin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36B3 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 3, Lot 10 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-15-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Old Borrow Pit.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent
(drying partially in all years and
completely in drought years) Ephemeral
(drying out during the growing
season in most years) Unknown

Old borrow pit location, flat landscape and shallow pool.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-15-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)				Tadpoles/Larvae			
	#	Method of Verification*	Confidence Level**	Method of Verification*	Confidence Level**			
Wood Frog						**S		3
Spotted Salamander								
Blue-spotted Salamander								
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted:
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Many wood frog tadpoles observed within pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-15-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-54



Photo 1: Vernal pool location at old borrow pit, photo taken 6/20/08.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-55

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36B3 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 3, Lot 10 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-15-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Old Borrow Pit.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Old borrow pit location, flat landscape and rather shallow pool.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-15-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*	Confidence Level**		
Wood Frog	6					**S	3	
Spotted Salamander								
Blue-spotted Salamander								
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted:
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

**Few wood frog tadpoles observed within pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-15-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-55



Photo 1: Vernal pool location at old borrow pit, photo taken 6/20/08.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-56

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Bruslin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36B3 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 4, Lot 3 and Map 4, Lot 2 Phone: _____

Street Address: _____ City: Princeton State: ME Zip: 04668



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-27-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: Ditch line

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Ditch line created by previous logging activity.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent Ephemeral Unknown
(drying partially in all years and (drying out during the growing
completely in drought years) season in most years)

Woody and herbaceous plants within and located along edge of ditch line.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present)

Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)

Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): ditch line



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-28-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(confidence level (CL) for each species observation. Observations must Form (available from MDIFW) and photographs (labeled with observer

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-27-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-56



Photo I: View facing north of small ditch-line vernal pool.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-57

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Bruslin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36B3 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 1, lot 4 Phone: _____

Street Address: _____ City: Princeton State: ME Zip: 04668



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-27-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Route 1 situated between pool and pipeline corridor.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent
(drying partially in all years and
completely in drought years) Ephemeral
(drying out during the growing
season in most years) Unknown

Shallow isolated pool, rather flat landscape.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-27-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)				Tadpoles/Larvae		
	#	Method of Verification*	Confidence Level**		Method of Verification*	Confidence Level**	
Wood Frog					**S		3
Spotted Salamander	10	S	3				
Blue-spotted Salamander							
Fairy Shrimp							

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

Wood frog tadpoles common within pool.

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-27-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIEW use only Reviewed by MDIEW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR
 does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-57



Photo 1: View of vernal pool facing north.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-59

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)
 Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Brusltin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36B3 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 1, Lot 4 Phone: _____

Street Address: _____ City: Princeton State: ME Zip: 04668



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-27-08

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Previous logging activity.

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent
(drying partially in all years and
completely in drought years) Ephemeral
(drying out during the growing
season in most years) Unknown

Shallow pool, located in a flat area.

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: _____ m ft Length: _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present) Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern) Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern) Wet site graminoids (e.g. grasses, sedges, cattails)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-27-08

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)			Tadpoles/Larvae		
	#	Method of Verification*	Confidence Level**	Method of Verification*	Confidence Level**	
Wood Frog	1	S	3			
Spotted Salamander	2	S	3			
Blue-spotted Salamander						
Fairy Shrimp						

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: _____
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-27-08

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 does not meet vernal pool definition criteria



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-59



Photo 1: View of vernal pool facing north.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-101

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1)

Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Bruslin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist

Trained Citizen Scientist

Professional Wetland Scientist

Self-informed Naturalist

Professional Biologist (concentration: _____)

Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools:

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)

- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of _____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 12, Lot 30 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-01-09

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Located adjacent to utility line access road impacting hydrology in the area

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent
(drying partially in all years and
completely in drought years) Ephemeral
(drying out during the growing
season in most years) Unknown

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 40 _____ m ft Length: 66 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-1-09

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)					Tadpoles/Larvae		
	#	Method of Verification*		Confidence Level**	Method of Verification*	Confidence Level**		
Wood Frog	1		S	3				
Spotted Salamander	11		S	3				
Blue-spotted Salamander								
Fairy Shrimp								

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes above, indicate which species were targeted: Wood Turtle
- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Vouchered, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord Date 5-01-09

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: significant significant but no landowner permission not significant due to:
 insufficient data OR does not meet biological criteria and/or
 Does not meet vernal pool definition criteria.



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-101



Photo 1: View of vernal pool facing west.



Photo 2: View of small egg mass.



Significant Vernal Pool Data Collection Form



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: VP-102

1. PRIMARY OBSERVER INFORMATION

Contact Information and credentials previously provided? No (complete all of section 1) Yes (only name and phone number required)

a. Contact Information

Name: Leonard Lord

Company: Vanasse Hangen Bruslin, Inc

Street: _____

City: _____ State: _____ Zip: _____

Phone: 603-644-0888

Email: llord@vhb.com

b. Credentials

■ Please check all that apply; Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required by nonprofessional observers. Label all photographs with the Observer, Pool Location, and Date of Image.

Professional Herpetologist and/or Ecologist
 Professional Wetland Scientist
 Professional Biologist (concentration: _____)

Trained Citizen Scientist
 Self-informed Naturalist
 Other: _____

■ Please indicate your professional education, training, or certification that qualifies you to conduct biological surveys of vernal pools: _____

2. VERNAL POOL LOCATION INFORMATION

a. Location

DeLorme page and grid (e.g. 04E2): 36C4 Township: Calais

Brief site directions to the pool (using mapped landmarks):

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

USGS Topographic Map or USGS NWI Map (1:24,000 scale) with pool clearly marked.

Large Scale Aerial Photograph (1:12,000 scale or better) with pool clearly marked.

GPS Coordinates (complete section below).

GPS location of vernal pool (UTM, NAD83 preferred.)

Longitude/Easting: _____ Latitude/Northing: _____ Datum (e.g. NAD83): NAD83

Brand and model of GPS unit: Trimble ProXT

Check one: The pool perimeter is delineated by multiple GPS points. (best option)
- Include map or spreadsheet with coordinates.

The above GPS point is at the center of the pool. (good option)

The center of the pool is approximately _____ m /ft in the compass direction of
_____ degrees from the above GPS point. (acceptable option)

c. Landowner Contact Information

■ Are you the landowner? Yes No If no, was landowner permission obtained for this survey? Yes No

■ Does SVP Habitat (pool + 250') extend across abutting landowner parcel? Yes No Unknown

■ Landowner's contact information (if known) Name: Map 11, Lot 1 Phone: _____

Street Address: _____ City: Baileyville State: ME Zip: 04694



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION

a. Survey Date(s): 5-01-09

b. Wetland Habitat Characterization

- Choose the best descriptor for the physical setting:

Isolated upland depression Pool associated with larger wetland complex
 Floodplain depression Other: _____

- Check all wetland types that best apply to this pool:

Forested swamp Wet meadow Slow stream
 Shrub swamp Shallow pond Floodplain overflow
 Peatland (fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

c. Vernal Pool Status Under the Natural Resources Protection Act (NRPA)

i. Natural Origin

- Select the pool's origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the wetland:

Located adjacent to utility line access road impacting hydrology in the area

ii. Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

Permanent Semi-permanent
(drying partially in all years and
completely in drought years) Ephemeral
(drying out during the growing
season in most years) Unknown

- Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

- Approximate size of pool (at spring highwater): Width: 10 _____ m ft Length: 100 _____ m ft

- Predominate substrate:

Mineral soil (bare, leaf-litter bottom, or upland
mosses present)
 Mineral soil (sphagnum moss present) Organic matter (peat/muck/mud) shallow
or restricted to deepest portion
 Organic matter (peat/muck/mud) deep
and widespread

- Nonwoody pool vegetation indicators (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap
moss, lycopodium spp.)
 Dry site ferns (e.g. spinulose wood ferns,
lady fern, polypody fern)
 Moist site ferns (e.g. sensitive fern, marsh
fern, New York fern)
 Moist site vasculars (e.g. skunk cabbage,
jewelweed, blue flag iris, swamp candle)
 Sphagnum moss (anchored or suspended)
 Wet site ferns (e.g. royal fern, cinnamon fern,
interrupted fern)
 Wet site graminoids (e.g. grasses, sedges, cattails)
 Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lilies,
water shield, pond weeds, bladderwort)

- Faunal indicators (check all that apply):

Fish (list species if known: _____) Bull frog or green frog tadpoles

iii. Inlet/Outlet Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet Other or Unknown (explain): _____



Significant Vernal Pool Data Collection Form



3. VERNAL POOL SURVEY INFORMATION, continued from page 2

d. Significant Vernal Pool Status Under NRPA

i. Survey Date(s): 5-1-09

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 - For each indicator species, indicate the exact number of egg masses, method of verification, and confidence level for each life stage. Separate cells are provided for separate survey dates.

INDICATOR SPECIES	Egg Masses (or adults of Fairy Shrimp)				Tadpoles/Larvae	
	#	Method of Verification*	Confidence Level**	Method of Verification*	Confidence Level**	
Wood Frog						
Spotted Salamander	1	S	3			
Blue-spotted Salamander						
Fairy Shrimp						

*Method of verification: S = Seen, H = Handled, P = Photographed **Confidence level in observation: 1 = <60%, 2 = 60-95%, 3 = >95%

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 - If yes above, indicate which species were targeted: Wood Turtle
 - Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations must be accompanied by a Rare Animal Form (available from MDIFW) and photographs (labeled with observer name, pool location, and date).

SPECIES	Method of Verification*				CL**	SPECIES	Method of Verification*				CL**
	V	P	H	S			V	P	H	S	
Blanding's Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Wood Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spotted Turtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Ribbon Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ringed Boghaunter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*Method of verification: V = Voucherized, P = Photographed, H = Handled, S = Seen

**CL - Confidence level in observation: 1= <60%, 2= 60-95%, 3= >95%

e. General Comments and/or Observations of Other Wildlife Species:

4. OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge.

Signature Leonard Lord

Date 5-01-09

All submissions and supporting documents will be retained by the Maine Department of Inland Fisheries and Wildlife. Information submitted on this form and accompanying documents is part of the public record.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401
Tara.King@maine.gov



<u>For MDIFW use only</u>	Reviewed by MDIFW	Date: _____	Initials: _____
This pool is:			
<input type="checkbox"/> significant <input type="checkbox"/> significant but no landowner permission <input type="checkbox"/> not significant due to: <input type="radio"/> insufficient data OR <input type="radio"/> does not meet biological criteria and/or <input type="radio"/> does not meet vernal pool definition criteria.			



Vanasse Hangen Brustlin, Inc.

Representative Vernal Pool Photos, Calais, ME
VP-102



Photo I: Overview of vernal pool facing west.